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CONCEPTS



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PREFACE

Mr Stepanov's book "Proteus. Essays on Chaotic Evolution" (Moscow, 2004) appeared at my disposal in 2008 when on the 13th of May I discussed my dissertation with the author at his home. It was as I recall a breakpoint of my future research, because Prof. Stepanov has written a dedication to me on the first title page of his book: "To Sasha Maryukhin in the day of discussion the problems of "linguistic hedging" but without hedging!". Yet only at the present days in July 2021 I paid my attention to this remark which gave me something more than a simple push to a new study.

Prof. Stepanov's remarks influenced my decision to deep logico-philosophical investigations. We gained much force to protect logical idealism although Stepanov's realism prevailed over it since appearance of his first book "Introduction into Linguistics" (1961).

Mr Stepanov, like many linguists, philosophers, and culturologists understood the language as a special system of signs. Nowadays, the analysis of language evolution begins with the simplest elements in nature, with tropism or plants' moving. The next step is represented by communicative systems of insects and animals. The last stage is a human language, which finds reflection in artificial systems like that of mathematical logic. All these aspects are united under the title "Semiotics". Its parts predominantly deal with natural language – be it biosemiotics, ethnosemiotics, cultural semiotics, linguosemiotics or conceptual semiotics. This scheme is contraposed to the version of the Copenhagen Linguistic School, which considers language as a closed indescribable system. The representatives of the Prague Linguistic School consider human language lying between the nature and the culture. It is a weapon, model, and metalanguage to control all other systems. The transition from biological communication to cultural one gives a spread to a new creative moment.

In my book, I describe the language as a system of concepts – theoretical or empirical. Theoretical concepts are "invisible" elements of internal science while empirical concepts can be observed and even fixed on a photo or a picture. Some of such concepts are introduced below, as an example.



Two concepts of
two epochs in
linguistics –
Moscow-Paris

or

Maryukhin-
Stepanov's
separation
through time and
space



One concept of one epoch –
Moscow, Institute of Linguistics
or
Maryukhin-Stepanov's collaboration
for the Unity of Science

Looking at these two photos, I draw a parallel between science and sensations, between cultures and epochs, between ideas and their realisation. Knowledge extracted from them is represented in a verbal formulation. What is expressed with it are thoughts. These are what really matters. But thoughts only get a precise form through their linguistic formulation. The formation of concepts is closely related to language, as the word gives the concept an objective correlate. Through language, thoughts become perceptible to the senses.

It has been proven that the origins of thinking are to be found in the combination of different experiences and in the understanding of the relationships between different things. As a result, the first task of epistemology is an analysis of language in order to clarify its essential structure. Speech analysis has come to the fore of interest in our century. It was tackled on the one hand by Mr Marty and Mr Husserl, on the other hand it was also promoted by Mr Moore and especially Mr Russell. Mr Wittgenstein declared it programmatically as the process of philosophy, and under his influence the Vienna Circle accepted it, and it underwent a broad development in the neopositivism that originated from it. Mr Wittgenstein and, following him, Mr Ayer declared the analysis of language to be the real task of philosophy.

All philosophy is a critique of language. In “semantics”, language is examined with regard to the function of meaning. It is about the signs and their meaning and their connection to meaningful sentences. It is abstracted from the fact that the language signs have to be produced by someone and are received and understood by someone. If these conditions are included in the investigation, then instead of the purely semantic, the “pragmatic” point of view is used. This includes empirical, psychological, and sociological investigations, while semantics is limited to mere relationships between signs and meaning.

Semantics is only part of a comprehensive area, “semiotics”, which encompasses the study of language in all directions. It is not about a specific language, but about the structure of a language in general.

I express my regards to the Institute of Linguistics in Moscow for providing research materials and ideas.

Astrakhan, 2021

§1. The Functions of Language

1. The purpose of language is practical. Language in the strict sense of the word is only present when something is intentionally used as a sign. This is how it differs from interjections and involuntary expressions of emotion. Insofar as a sign is deliberately used for communication (as in the case of bees), language can also be spoken of by animals.

2. Depending on what the language is used for, different functions of the language can be distinguished. Mainly three things are kept apart: the representation of objects and facts, the “symbolic function”, the expression of feelings, the “symptom function”, and the request for behavior, the “signal function”. The emotion-inducing function of language plays no less important role than the others.

3. For the investigation of a certain language the object is actually given, not the language in general. One can determine the structure of a language by looking for what is common to natural languages of different types. This is the linguistic way of universal language comparison, which requires a rare knowledge of the different types of language structure. It is the way of inductive generalization, and the general structure of language is then an empirical hypothesis.

4. But with regard to what is essential for the construction of a language, empirical statements of facts are not really important, because it is a question of the structure of every possible language, of a logical grammar, of what is inevitably necessary for the expression of thoughts, not all that has actually developed in unison for it.

§2. Object Language and Metalanguage

1. If language becomes the object of investigation, it must itself become the object of linguistic representation. When talking about non-linguistic objects, these form the object and language the means of representation. When one talks about a language, this forms the object, and the means of its representation can be another language. There is then an “object language” or a “metalanguage”. But what is it like when the object language is used as a metalanguage? One must therefore always keep an exact distinction between object language and metalanguage. If both belong to the same language, they exist in different parts of that language. These must be distinguished from one another by distinguishing the expressions of one language from those of the other. The expression “the Pythagorean theorem” belongs to the metalanguage; it denotes the sentence of the object language: “In a right-angled flat triangle, it is $a^2 + b^2 = c^2$ ”. Every statement that designates a sentence as true (or false) is a statement about a sentence, that is, a statement of the metalanguage, while the sentence assessed in this way belongs to the object language.

2. The metalanguage must always be richer than the object language. The metalanguage contains its own new predicates, semantic predicates. These occur only in it and not in the object language.

3. The distinction between object and metalanguage is important because it makes it clear what it is about: whether a question concerns factual or linguistic relationships. Otherwise the investigation is apt to go astray, resulting in pseudo philosophical problems and pseudo-solutions. Thus, through this distinction, the liar's antinomy is resolved. A sentence cannot itself express its truth or its falsehood. A sentence like "I'm lying now" or "This sentence is wrong" would be a sentence in metalanguage because it expresses a truth value. But the corresponding sentence of the object language, the content of the lie or the wrong sentence, is missing. That is why the whole sentence is empty.

4. That it is object language or that it is metalanguage does not stand for a language once and for all, but is something relative. You can turn the metalanguage into an object language again, for that you need a new metalanguage.

§3. The Structure of Language

1. Language is based on the phenomenon of the sign and its meaning. A language is characterized by the fact that it has a number of characters and rules according to which these can be combined to form new, compound characters (expressions, sentences). It is the rules of form, besides the rules for the meaning of the signs.

2. What is specific about a sign is that it does not simply represent itself, but that it points beyond itself to something other. Without the meaning function, it is not a sign at all, just a physical object or process. It is true that systems of signs are also built up without any meaning, the pure calculi. A calculus does not only consist of figures and their combinations. The signs of a calculus also have meaning. They denote very general classes: constants, variables; some of them even have very special meanings; the brackets also mean something.

3. A sign points beyond itself because it is consciously connected to something else. When one perceives and understands a sign, a word or a sentence, it causes one to think of a particular object or state of affairs. If one does not understand a sign, say Chinese writing, it is because it does not evoke anything else in the consciousness. The meaning consists in the relationship between a physical object (writing, colored light, etc.) or process (sounds, gestures, etc.) and an object in the broadest sense of the word. (The word "object" has widely differing meanings). The sense in which it is used must therefore be clearly indicated.

4. The connection between signs and what is designated is conventional. Only in the case of linguistic new formations, as they occur especially in scientific terminology and in artificial languages, such as in logistics, but also in those like "UNO" for the United Nations, the correlation is consciously established. It is then expressly formulated by rules. In natural languages, on the other hand, the meaning of each simple sign is determined by its usage. The correlations have formed unconsciously. The child learns practically what the individual characters are to be used for.

§4. The Signs

1. A sign consists of a sound structure or a visible or a tactile shape. Depending on the type of characters used, different types of languages are distinguished: sign, flag, spoken/written language. The word “language” is only one of them, the most important because it is by far the most developed. Words are specifically linguistic signs.

2. The signs of a language are divided into simple and compound ones, as Morse language shows in a particularly simple way in the lines and dots and their composition. The grammatical classification of the words in a natural language is not based on the mere sign shape, but on the meaning. A word can be regarded as a simple sign if it cannot be divided onto components that occur independently. Conjugated and inflected word forms can be seen as simple words, although they can be broken down into the stem and the endings, because these do not occur independently.

§5. The Meaning

1. In modern language analysis, only whole sentences have a meaning, but not individual words. Because only a statement has a clear meaning and communicates something. Then a sentence would represent a name for a state of affairs. What this name denotes is not determined by a special correlation with the respective situation, as is usually the case, but results from the connection of individual words to a sentence. But how a meaning at all can come about through the combination of signs that do not yet have a (specific) meaning for themselves remains incomprehensible. A sentence function therefore already presupposes meaningful words.

2. A sign has meaning because it is consciously correlated to an object (in the broadest sense). The meaning of a sign is grasped in understanding. Understanding consists in the fact that the perception of a sign evokes awareness of the correlated object. How this consciousness appears is not clear. Mr Husserl, who has dealt with the phenomenology of meaning most extensively, has divided the way in which meaning becomes conscious into two stages. He differentiates between the “fulfillment of meaning”, in which the objective by virtue of accompanying perceptions is currently present or at least made present (e.g. in fantasy), and the “meaning intention”, in which the object is merely “meant”.

3. The correlation of a sign with an object is established by learning a language. It is certainly first experienced as a relationship between two distinct members, a sign (type) and special cases of the associated object. This interrelation then becomes so common through practice that the second link, the object, no longer has to be fully reproduced when the sign appears, but only suggests it or remains a disposition that is updated when there is a special occasion required. In his last work Mr Wittgenstein repeatedly argued that when you understand words, as you do when reading and in other examples, you cannot find anything that occurs in your consciousness. The meaning of a word or a sentence cannot be stated as a phenomenon of consciousness.

Understanding a word simply means being able to use it correctly. The meaning of a word is not in a phenomenon of consciousness. The words then act as signals that automatically direct behavior,

4. But when words and sentences are used not to induce action but to communicate, things are different. If you read something or hear a message without doing anything or changing your behavior, words and phrases are only used to convey knowledge. In any case, when we understand them, something comes into our consciousness that is more than the mere perception of the signs. Understanding the meaning of a sign means knowing what it represents. How this knowledge is experienced, what actually occurs in consciousness as a result of the perception of a sign, is a matter of psychology to determine, which, however, has not yet got very far.

§6. Types of Meaning

1. Everything that can be differentiated and delimited from other things, everything that is contained in the world, can function as the rear link of the sign relationship, as a significant object (in the broadest sense). But it is not the world as such, with which the signs stand in direct correlation, but our world, what we know about the world, but also what we believe and imagine. Because all of this is biologically, psychologically, sociologically, historically conditioned, it is also what a language contains in terms of meanings. As a result, the classes of what the signs of one language mean can be profoundly different from the classes of meanings in another language, according to the world horizon of the language's creators and the world structure that emerged from them. This is reflected in the type of structure of a language and results in different classes of meanings. Thus, in one type the world is viewed as something that happens to one, while in another it is understood as a field of action. From the point of view of general semantics, one must therefore seek the most general categories of meanings.

2. The traditional "categories", as presented in connection with the Aristotelian, in no way indicate the kinds of what words mean. Aristotle's categories, substance and its accidents or attributes: quantity, quality, relation, place, time, action, sensation, contain the classes of the determinations of what is called "the highest genera of the predicates of beings". They are not always understood as ontological categories. Kant explained the categories as synthetic intellectual functions, as original forms of thought through which "only experience (according to the form of thinking) becomes possible". An object can be understood as everything that is thought, conscious, and meant. Mr Husserl did not refer the categories to beings *per se*, but to the beings that are expressed in the meanings. Mr Rehmke regarded them as the most general determinations of the "given." But none of them made a useful classification.

3. The distinction between auto-semantic and synsemantic meanings cannot be specified or replaced by that of descriptive and syntactic meanings, because the syntactic words often include a descriptive content. Syntactic words mean intra-

linguistic relationships, through which components of sentences or entire sentences are linked with one another. On the one hand, conjunctions have a syntactic function in that they connect sentences. But the relations between the sentences they indicate are descriptive. They are the relations of cause and consequence (because) or of cause and effect (by that) or of succession (after) or of simultaneity (during) or of same place (where) etc. The conjunctions are abbreviations for these relationships, at the same time they have a descriptive content. As a result, the division into descriptive and syntactic words does not result in a clean dichotomy, because the descriptive meanings overlap with the syntactic meanings. One can only separate internal and external, syntactic and non-syntactic meanings in an exclusive manner. But the extra-linguistic elements do not coincide with the descriptive.

§7. Terms and Meaning

1. A term is understood as the (mental) separation of objects or object properties from the universe of all possible objects or object properties (designata) and their assignment to a character (designator) with the help of correspondence rules. In the case of a concept of observation, this can be shown schematically and in simplified form as follows:

- a) Sign (designator): red
- b) Correspondence rule: pointing to all objects (of the subject area) that have the characteristic “red” corresponding to the sign “red”.
- c) Facts (designate): Class of all objects with the manifest characteristic “red”.

The correspondence rule here specifies an operation: the direct reference to a “manifest” feature; one therefore also speaks of an “ostensive” definition. Since it implies the operation of “pointing to ...”, it is always also an operational definition.

2. Serious claims can be raised against this naive-realistic notion of a direct correspondence between concept and facts which, for example, plays a certain role in the concept of validity of a content.

The uniqueness and validity of ostensive definitions is only a sham. If one points to an object, the “addressee” of the pointing action needs by no means to be clear about what is meant. For example, the meaning of the proper name “John” should be conveyed. The corresponding rule of correspondence: “Point to all people who have the common name of John”. However, since one can only refer directly to objects, not to predicates, it is unclear which property we are referring to when referring to or pointing to people: they have other properties in common, which could be meant even as an infinite number. Meaning and factual reference can therefore fall apart.

3. The theory independence of a “world of given facts”, the basic dogma of naive and still early logical empiricism is untenable. This becomes clear if one tries to transfer the above scheme to the process of determining the meaning of a theoretical (“latent”) term. For example, the term “social status” does not correspond to any directly ostensively demonstrable facts that exist independently of the validity of a

more or less implicit “theory” about observable (manifest) causes and / or “effects” of the latent property.

Theoretical variable “social status” with “effect” or “cause” indicators (which in turn are supposed to represent a latent state of affairs) are only valid to the extent that the (mostly rudimentary) “theory” of the construct is correct.

Many signs have no factual reference at all, but have a meaning. These include logical signs such as “and”, “or” etc., the meaning of which is implicitly defined by specifying a so-called logical function. The same concerns number symbols (7, $\pm$ etc.) as well as all non-descriptive characters like “unicorn”, “centaur”. While the latter can still be justifiably eliminated from scientific language, this does not work with logical, mathematical and other signs, the definition of which in any case goes beyond the simple sign-meaning-factual scheme and requires its own methods of definition.

§8. The Doctrine of Concepts

1. The first most general rule is this: every thought, every idea, every concept should be understood as what it is and means, and not as something else or even as its own opposite. In the concept of human being, human beings should be understood as human beings and not as animals. The concept of black should be thought of as black, that is, as a complete darkening of all colors, not as something dark green or dark blue. The concept of being should be understood as being, not as nothing or non-being, the infinite as infinite, not as finite. This law is called the principle of uniformity or the *principium identitatis*.

The principle of unity can be expressed in two ways, in a positive and a negative way. The general formula for the positive version is $A = A$. Every idea, every concept is and means what it is. The negative formula is A is not $=$ non A ; a concept must not be thought of as what it is not or as one that falls away from itself. Violations of the principle are often made because the language does not always clearly designate the concepts; there are often several expressions for one and the same thing, often a word serves to denote several things.

No one will run the risk of confusing terms such as triangle, square, circle, house, tree, dog, but it can happen with those that contain much similar things, such as fox, dog, wolf. The more general and empty of content the concepts become, the more distant their relation to what is immediately given or concrete, the more difficult it is to hold on to what is to be thought through them.

2. The second logical principle is the principle of the contradiction. It states that when two opposite predicates are presented for one and the same subject in one and the same relation, both cannot hold together. A is not both B and non B . A round table with four corners of the tabletop is a nonsense and an impossibility.

3. The third principle is the principle of the excluded third party, *principium exclusi medii vel tertii inter contraria*: A is either B or not B . Should it combine both B and non B , it would contain a contradiction and therefore be inadmissible according to the principle of contradiction.

To think a concept clearly means to distinguish it from other concepts so precisely that there is no confusion. By differentiating a term from other similar or opposite ones, one says: A is not B, not C etc. However, this does not assign a property to A. A gains and does not lose any positive property by judging that it is not, what others are. That is why the sentence: *omnis negatio est determinatio* and vice versa is wrong. Substantial monism rests on this proposition when it says: beings are not if they are not everything; Being would be negative or negated if there were something else besides it that it is not itself. The sentence: *oninis negatio est determinatio* arose from the effort to think a term clearly.

4. The further definition of abstract concepts by adding special features is called *determination*. Determination leads one to move from the general concepts to the particular concepts subordinated to them, or from the content of a concept to its scope. The method of determination is therefore nothing other than a reverse reproduction of the series of subordinate concepts that have arisen through abstraction. Therefore it is a mistake to think that by determining the most general concepts originally obtained by abstraction, one can really derive a new knowledge.

This opinion is called logical realism (*universalia ante rem* or *in re*). On the other hand, there is logical nominalism, which regards the concepts only as products of our thinking (*universalia post rem*). Logical realism asserts that the genera are more real than the species, or the individuals. In this way, the species of the individual phenomena are assumed to actually exist.

§9. The Constitution of Concepts

1. The meaning of the words is learned through the use of language. In the child, this happens, especially initially, because it automatically finds out what words and idioms mean, that is, it finds the usual correlations between signs and meanings, supported by information and descriptive explanations of the meaning from those around them. Initial misunderstandings gradually correct themselves as the child notices that his/her use of the word does not match one of its surroundings.

2. The indication of what a sign means can be done by describing what is meant by other meanings. This “verbal definition” is particularly used in legislation, science and teaching. The defining terms must be given as known. Therefore, one must ultimately base a number of signs (words) that are represented in this way by verbal definition indefinable. The meaning of such words, their correlation, can be established by direct reference to what they are supposed to mean. However, this type of definition, the “indicative definition”, is often misunderstood and therefore receives unjustified criticism. You think you can just point out what a word is supposed to mean, e.g. “a red object”. But the reference to a red rose by no means clearly relates to the red color about it; it can also be related to its shape or to its scent or rather, as a special characteristic, to the whole rose.

3. The definition by demonstration is limited to the area of what can be demonstrated. It has to be present immediately, and these are always only experiences, perceptions, ideas, feelings, desires... If the correlation of a sign with

what it is supposed to designate is to be established by mere reference to it, then all of these words would have to be names for something that is present for the whole experience or for parts of it. But that is by no means the case. Not even the proper names denote a single experience or a part of it, but mostly physical individuals. If the correlation by reference is not to lead to proper names for individual experiences, then the reference must serve to establish relationships between what is present in experiences. This goes beyond the individual that can be pointed out. Therefore one has to find the relationships independently.

Whoever learns to understand a word in this way has to form a concept himself/herself. If all meaning is ultimately based on presentation, then it cannot contain anything other than experience data and their relationships. Empiricism from Mr Locke to Mr Russell and Mr Carnap has advocated the principle that all concepts go back to impressions of sensory or “self-perception”. This principle implies a twofold sense. It may be said: “All concepts can only contain something that is taken from the experience, because the experience is the exclusive source for it. That is a psychological question of fact. Any other kind of meaning would be excluded. What the imagination produces cannot be anything other than that “simple impressions” put together in a new way”. The principle of empiricism, on the other hand, may say: “All legitimate concepts can contain experiential relationships, because only then do they have a precisely comprehensible content. That is a requirement. The concepts which emerge from the imagination as newly formed do not contain any relationships of experience and are therefore not usable for knowledge; they are illegitimate. Accordingly, Mr Russell has repeatedly made the demand to use concepts which are formed from known entities by “logical construction” instead of introducing unknown entities. And known objects are only sensibly given (sensibilia). So a “logical construction” exists in a context of sensual phenomena. do not contain any experience relationships and are therefore not usable for knowledge.

4. Mr Carnap made the instructive attempt to implement the principle of sensualism systematically in the “Logical Structure of the World”, 1928. He defined the basic categories of concepts, with the exception of the mathematical and logical. But there are in any case terms that contain something other than experiential relationships, terms that concern a world outside of one's own experiences. It is precisely the most important concepts, the fundamental ones for knowledge. Mr Carnap himself has already named a large class of terms that do not contain experiences and can thus be defined the “disposition terms”, such as soluble or elastic or electrical conductor. Such a condition consists in a disposition to a certain reaction under certain circumstances. But this reaction has not yet occurred as long as it is a disposition; it is only to be expected. But if the reaction has occurred, then it is no longer a disposition. When a piece of sugar has dissolved in tea, one can no longer say that it is soluble, only that it has dissolved. Such a concept does not contain relations of actual experiences, but a prediction of such, based on a law. It contains an extrapolation. It undoubtedly goes beyond past experiences.

5. Because concepts are constructed by combining features, it is essential to differentiate between purely arbitrary, fantastic constructions and those used for knowledge. It results from their possible application. This is excluded in

contradicting conceptual formations by the fact that they have to remain empty because nothing can fall under it. Because the arbitrarily composed mythical creatures are in contradiction to the laws of nature, they too are impossible and useless for knowledge. Constructions receive their legitimation through their performance. They have the task, on the one hand, of establishing general forms of order (regularity, number, time, space), and, on the other, of creating means to explain what has been experienced (body world, foreign soul, existence). To a large extent, they serve to create the means for the implementation of order in the individual (point, force and other components of the event). If it can be used for this, it can also be a fiction become a means of knowledge.

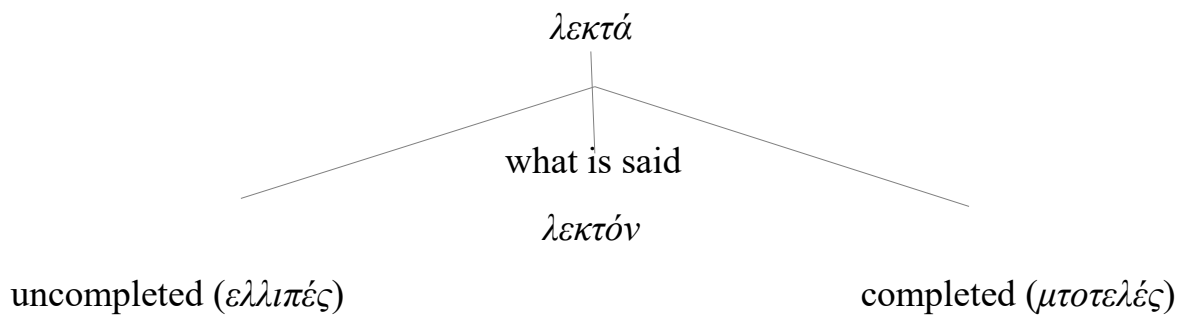
The concept of a point without extension has the sense of clearly defining a place in space or in time, to distinguish it from every other. It denotes the ideal goal that guides the actual destination of a place. As the dimensions become increasingly smaller, this determination can approach it asymptotically and in practice also reach it as soon and precisely as possible. If a construction cannot find such an application as that of a perpetual motion machine or a life force or the phlogiston or like the constructions of gods and spirits, then it remains an empty fiction without any value for knowledge.

6. In order to be suitable for these multiple services, the constructions must have relationships with what they are intended to order or explain. Ultimately, these are the experiences. In the case of the explanatory constructions, the relationships to experiences are guaranteed by the fact that they are created to explain phenomena that have been experienced. The constructions of order (space, time, law) are also related to experiences because they are based on relationships. The constructions usually do not refer *directly* to experiences, but their connection with them takes place in a detour. Force is not directly perceptible as mechanical, but is related to the fact that it is a condition of movement and movement can be perceived. But the detour is often much longer. The construction of “electric current” is related to the perceptible phenomena through which it can be ascertained, only through theories, the electromagnetism, the electrochemical processes.

§10. Historical Background: Semasiology of the Stoa

1. It is impossible to treat medieval semantics and linguistic logic without recourse to classical conceptions, especially those of Plato and Aristotle. By doing so, we limit ourselves to the consideration of a few basic features that are indispensable for our conception. So we have to come to terms with many ambiguities and contradictions that could have been eliminated with the help of more complete original texts. This is especially true of the doctrine of the *λεκτόν*, whose mode of existence (physical or not) has provoked an “endless dispute” among the Stoics.

Lekton is something rational that is contraposed to a thing and a symbol. *Tò λεκτόν* means non-material speech as a physical phenomenon. Thus, according to Chrisippus, all words are vague, because *lekton* is non-material.



The meaning (*σημαινόμενον*) is equated, for example, by Mr Steinthal with the *λεκτόν*. For him, the *lekton* is the thought content (the dialectical material) of the speech. Mr Steinthal, however, makes no observations about its ontological status, a question that Mr Bochenski touches on in more detail. The latter identifies the *lekton* with the *conceptus objectivus* of scholasticism. As one can see, the explanations are not always very clear. However, a distinction must be made between what the word says and what induces the reflection of its referent in our minds. The difficult question about the ontological status is answered by the observation that *lekton* does not have an independent existence such as the physical objects in the room, but is nevertheless something. Mr Long highlights the difference between the meaning of a noun and a verb as an example. While he sees a perceptible object in the referent of the noun, he believes he can show the meaning of an isolated verb as a *lekton*.

2. In this context, questions are raised such as: Does *lekton* exist as long as the sentences they express? Or does it exist somehow whether we think of them or not? According to Mr Ryle, the *lekton* ought to belong to those intellectual achievements which are condensed as dispositions from the so-called intellectual activities. The acceptance of an abstract entity as something designated does not necessarily have to be connected with the tendency towards reification. The mathematician also reckons with success with imaginary numbers. They use certain mathematical operations that cannot be performed. What is denoted by “ i ” or “ $\sqrt{-1}$ ” is a *lekton*; an abbreviation for intersubjectively communicable instructions, which certainly do not have an existence in the usual usage of the word, but their certain existence in the logical or mathematical space cannot be denied.

§11. The Concept of Semantics

If we look up any foreign dictionary to find out about the meaning of the word semantics, we will learn that it can be translated as “doctrine of word meaning” or equated with the concept of “semasiology”. The latter is divided into

- a) Word meaning theory;
- b) Doctrine of signs and symbols that express thought content (logic, logistics);
- c) Semiotics (= theory of symbols).

The conversation lexicon distinguishes linguistics and logical semantics. In principle, the philosophical dictionary makes the same distinction between the areas of validity. This brief comparison alone shows how extensive and diverse the meaning of the term semantics is. We can arrange the following sequence of levels of the essential term variants:

6. Semantics as a catchphrase,
5. Semantics as a phase of late bourgeois philosophy,
4. Semantics in the individual sciences,
3. General semantics,
2. Linguistic semantics (semasiology),
1. Logical semantics

Above all, however, we are interested in the question of whether and in what way one can speak of a general scientific foundation of the concept of semantics. For example, Mr Tarski has dealt with constituting exact semantics. He starts from the definition of the concept of truth. At the end of the investigation, he expressly points out that the empirical concept of truth could not be dealt with in this context. In his treatise “The Semantic Conception of Truth”, Mr Tarski represents a truth convention based on the results of his work “The Concept of Truth in Formalized Languages”.

Mr Tarski also uses the terms *material* and *formal supposition* to explain his convention. In the a) formal supposition, the word stands for what it designates (i.e. for a concrete object or for an abstract entity); b) material supposition, the word stands for itself.

We thus have an object-language reference for the formal supposition and a metalinguistic reference for the material supposition. Since a fact can only be expressed by means of a sentence or an analogous sign, the Tarski's Truth Convention can be represented as a relationship between metalanguage and object language, although it relates the object-language expression to the fact.

[The snow is white]

can be identified on its left and right side by the following references:

“The snow is white” is true and only true if [the snow is white]
suppositio materialis *suppositio formalis*

This can also be represented using semantic levels:

Material supposition	2. The sentence “Snow is white” is true (existent as a sentence about a sentence)	Level of meta-language
	1. Snow is white (existent as a sentence) (<i>true</i> if it is a case)	Level of object-language

Formal supposition	0. {Snow is white} is true (existent as a fact)	Level of significance
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The left-hand side of Tarski's convention thus consists of a metalinguistic judgment about the relationship between the object-language statement and what it signifies. Thus one can also formulate: The sentence "The snow is white" is true if and only if it correctly describes the facts. The semantic function of the Tarskian concept of truth lies in a metalinguistic judgment of the relationship between object-language and reality.

The essence of the material supposition consists in the fact that a word means itself as a word (or a statement means itself as a statement). The case cited by Mr Tarski, however, is not limited (as would be the case with a material supposition) to a judgment on a sentence as a sentence (leaving aside the content), but rather aims to evaluate it with regard to ultimately-meaning.

The supposition essential for the Tarskian semantic relationship is the formal supposition. Whether or not a statement has a correct designation determines whether it is true or not. But the formation of such a formal supposition does not depend on Tarski's quasi-material supposition. It is not very common to ask whether the word 'goldfish' is true, even if, for example, a child points to a carp and pronounces the word 'goldfish'.

§12. Semantic Levels

An important auxiliary term to answer the question posed in this study is that of the semantic levels or stages. This doctrine is already preformed in medieval supposition theory and serves not only to illustrate problems of meaning in general, but also to solve the so-called semantic antinomies. This level system should not be confused with other linguistic layer systems or arrangement schemes of phonematic or morphematic levels.

The grammar levels of structuralism or transformation grammar must not be identified with the classification principles. Everything about objects in this area belongs to the 1st degree. It is not a matter of discretion which items are grouped under the 0th degree. This question can be solved as follows: Objects of this area may be all entities that are not presupposed to designate another entity in the context of a language. The epistemological or ontological status should be disregarded.

- | | | |
|------------------|-----------|---|
| 0. Grade (level) | [house] | (a single real house) |
| 1. Grade („) | house | the word 'house' |
| 2. Grade („) | "house" | a word "house" that only means the word 'house' |
| 3. Grade („) | ""house"" | etc. |

As a preliminary result, we can record the following stratification of the units of meaning and their syntactic equivalents.

<i>Meaning units</i>	<i>Syntactic units</i>
1. Semem 2. Semantem 3. Phrenological meaning 4. Sentence meaning 5. Contextual meaning 6. Situational meaning	1. Morphem (= monem) 2. Logem (= word) 3. Phrasem 4. Syntactem (= sentence, utterance) 5. Textem 6. Pragmatem

§13. Relationship of Language to Culture

The search for correspondences between the structure of language and the structure of other aspects of culture occupies a significant place in modern anthropological research. Scientific discussion of this problem can be divided into two groups: the followers of Mr Whorf, who are trying to find correspondences (congruencies) between the languages any particular society and its cultural values, perception system and practical behavior, and scientists (Pike et al.), describing the structural units of society and clarifying the relationship between these units.

So, Mr Bock proceeds from the fact that “all linguistic forms (morphemes, syntactic and morphological structures, etc.) constitute a subclass of a more general category – the category of cultural forms. They are a set of interrelated and partially arbitrary expectations, understandings, beliefs and agreements shared by members of a social group, which influences or influenced the behavior of some members of this group”.

According to representatives of the Moscow Linguistic School, it is impossible to explain the data of language and culture within the framework of a unified theory, to transfer the language model to the subject area of culture and, on the contrary, the model of culture to the subject area of the language. It should be offered a more general apparatus of concepts, applicable to linguistic theory, on the one hand, and to the theory of culture, on the other. The basic concept of this apparatus is the concept of a constant “culture” – the sphere of culture, where words, things, mythologemes and rituals are united in one general concept. It is in the conceptualized areas that simultaneously belong to language and culture where the deep motivation of the individuals is hidden.

§14. Pragmatics

Traditionally, semiotic models describe a language in its three dimensions – syntactics, semantics, and pragmatics. Conventionally, the following content of these spheres is accepted: syntactics is interested in the area of relations between signs in the speech chain, semantics – the appeal of signs to their meanings and denotations (referents), pragmatics studies the relationship of signs to the speaker.

Knowledge of semantics is a part of the competence of the speaker, which is responsible for referring the sign to the world; knowledge of pragmatics is an indispensable attribute of his/her pragmatic competence, which, in addition to awareness of the pragmatic properties of the sign, also includes knowledge about the pragmatic situation, so-called “background” knowledge.

Therefore, the essence of choice is a constant balance between the personal and the general, the special and the ordinary, the arbitrary and the conventional, between what is necessary and what should be. The verbal choice that every speaker faces is different from the choice situations in nonverbal activity. The first one is stratified: it proceeds in two stages, which are fundamentally disjointed, but in their operational parts are essentially isomorphic. However, these stages are opposed to each other by the type and number of alternative objects. In the choice of grammatical means, the speaker deals mainly with binomial disjunctions. This is dictated by the very nature of grammatical categories, which are mostly implemented in binary oppositions of grammatical values.

The situation of choice is a kind of functional “superstructure”, which, by involving the user into the language, always holds the factor of life. The message is a reaction to the situation, and the latter becomes a denotation of the utterances that make up the message and their linguistic correlates – sentences. And if we consider the meaning of a language unit as a function of its denotation, it becomes clear that the semantic differences of units indicate their various ability to name, their applicability to various denotative situations; and their semantic community indicates the commonality of the ontological units.

Therefore, the nature of the denotative situation determines both what the speaker is going to say (such as the content of the message) and how he/she is going to communicate (the form of the message). The nature of the denotative situation also determines the relationship of linguistic units – the degree of their semantic separation (contrast), that is, their ability or inability to name one fragment of the world. This is an important aspect of semantic description.

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